FEB 0 8 2005
PATENT & TRADEMARK OFFICE

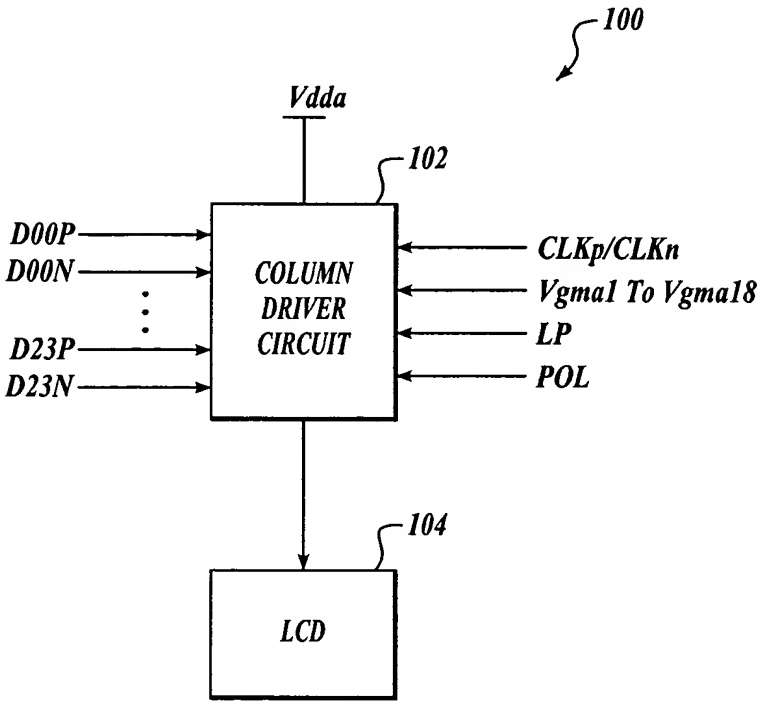


Fig. 1

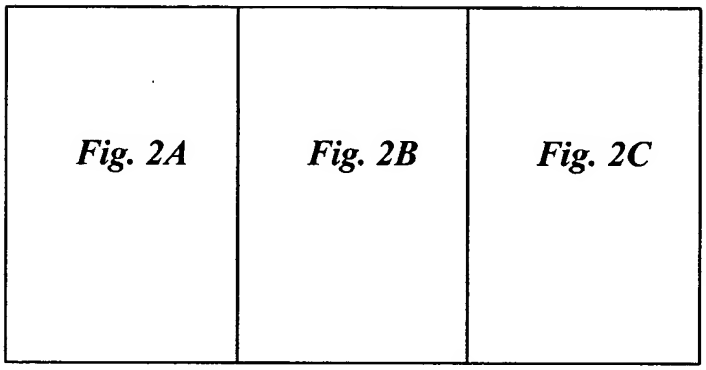


Fig. 2

Fig. 2A

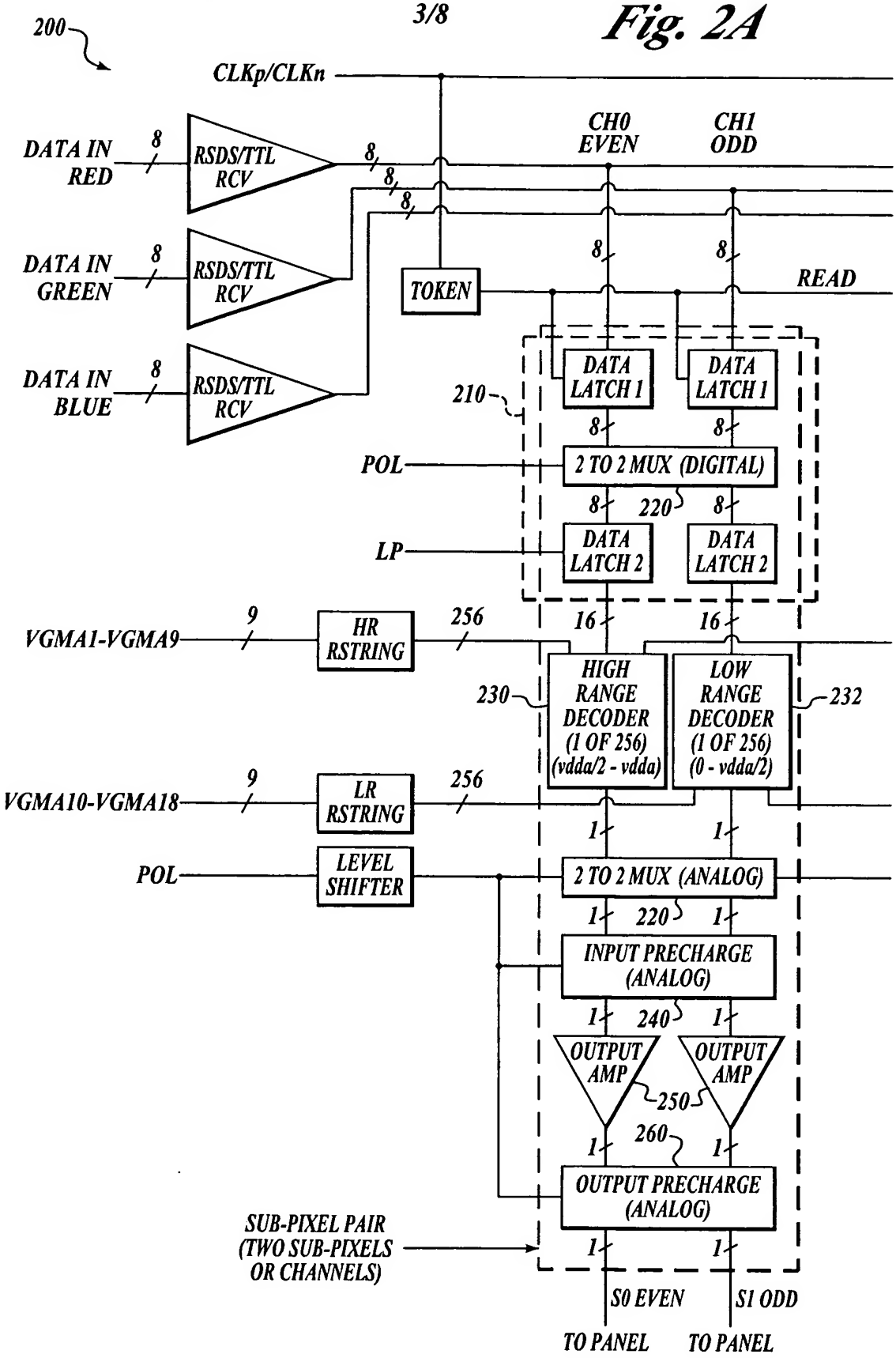

200
CLKp/CLKn
DATA IN RED
DATA IN GREEN
DATA IN BLUE
RSDS/TTL RCV
RSDS/TTL RCV
RSDS/TTL RCV
CH0 EVEN
CH1 ODD
TOKEN
READ
210
DATA LATCH 1
DATA LATCH 1
POL
2 TO 2 MUX (DIGITAL)
220
LP
DATA LATCH 2
DATA LATCH 2
VGMA1-VGMA9
HR RSTRING
256
HIGH RANGE DECODER (1 OF 256) (vdda/2 - vdda)
LOW RANGE DECODER (1 OF 256) (0 - vdda/2)
230
232
VGMA10-VGMA18
LR RSTRING
256
POL
LEVEL SHIFTER
2 TO 2 MUX (ANALOG)
220
INPUT PRECHARGE (ANALOG)
240
OUTPUT AMP
OUTPUT AMP
250
260
OUTPUT PRECHARGE (ANALOG)
SUB-PIXEL PAIR (TWO SUB-PIXELS OR CHANNELS)
S0 EVEN
S1 ODD
TO PANEL
TO PANEL

Fig. 2B

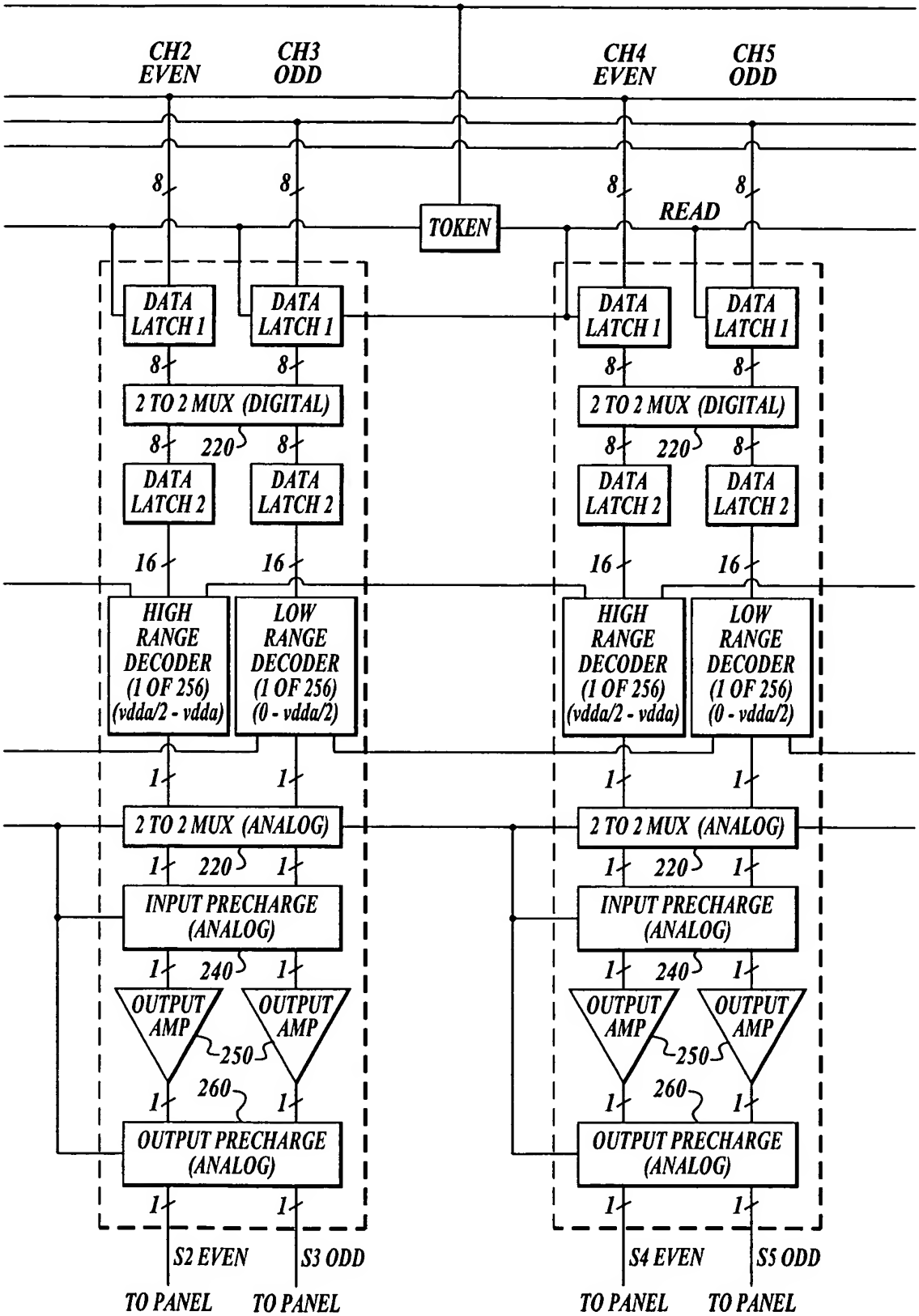
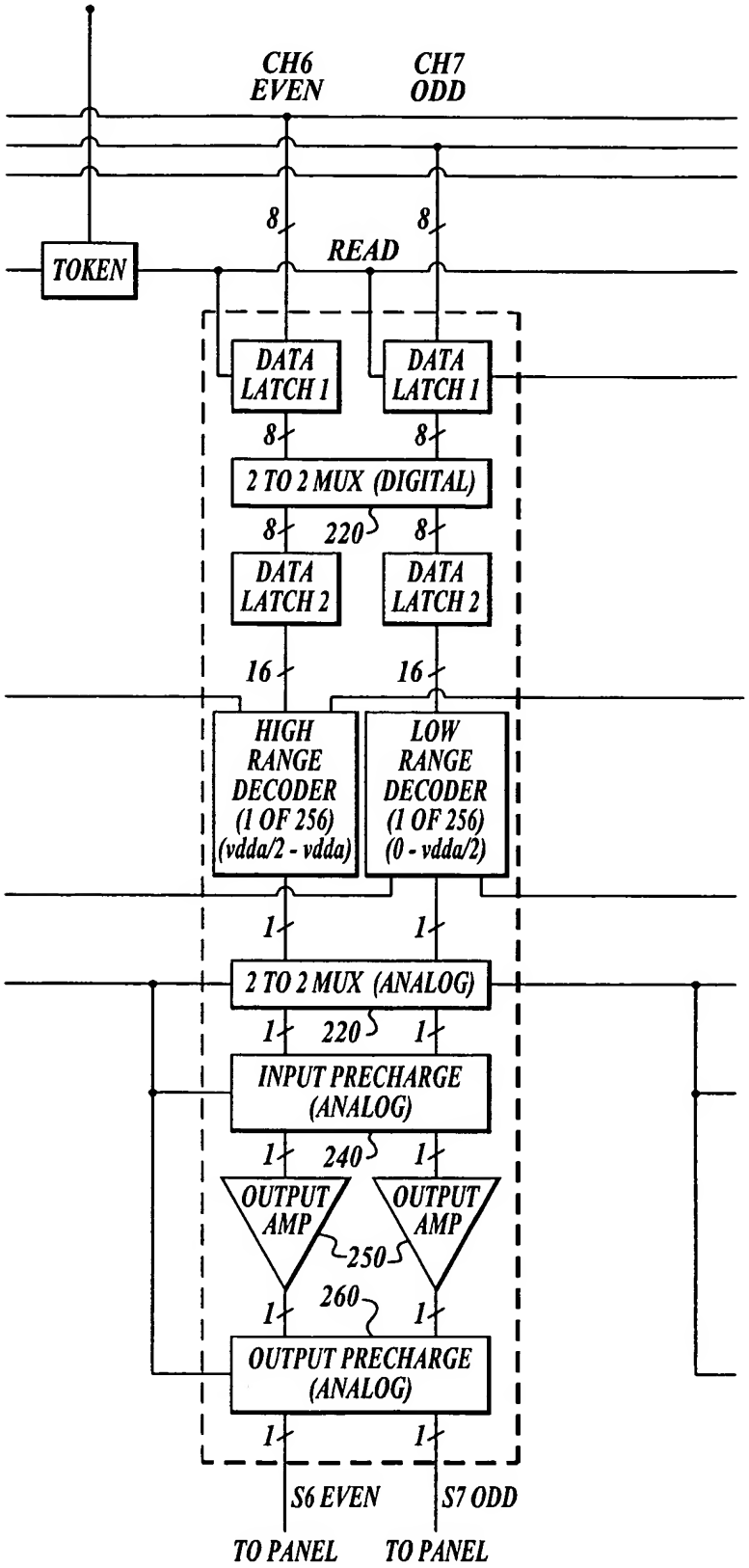

CH2 EVEN
CH3 ODD
CH4 EVEN
CH5 ODD
8
TOKEN
READ
DATA LATCH 1
2 TO 2 MUX (DIGITAL)
220
DATA LATCH 2
16
HIGH RANGE DECODER (1 OF 256) (vdda/2 - vdda)
LOW RANGE DECODER (1 OF 256) (0 - vdda/2)
1
2 TO 2 MUX (ANALOG)
INPUT PRECHARGE (ANALOG)
240
OUTPUT AMP
250
260
OUTPUT PRECHARGE (ANALOG)
S2 EVEN
S3 ODD
S4 EVEN
S5 ODD
TO PANEL

Fig. 2C


CH6 EVEN
CH7 ODD
8
8
TOKEN
READ
DATA LATCH 1
DATA LATCH 1
8
8
2 TO 2 MUX (DIGITAL)
8
220
8
DATA LATCH 2
DATA LATCH 2
16
16
HIGH RANGE DECODER (1 OF 256) (vdda/2 - vdda)
LOW RANGE DECODER (1 OF 256) (0 - vdda/2)
1
1
2 TO 2 MUX (ANALOG)
1
220
1
INPUT PRECHARGE (ANALOG)
1
240
1
OUTPUT AMP
OUTPUT AMP
250
1
260
1
OUTPUT PRECHARGE (ANALOG)
1
1
S6 EVEN
S7 ODD
TO PANEL
TO PANEL

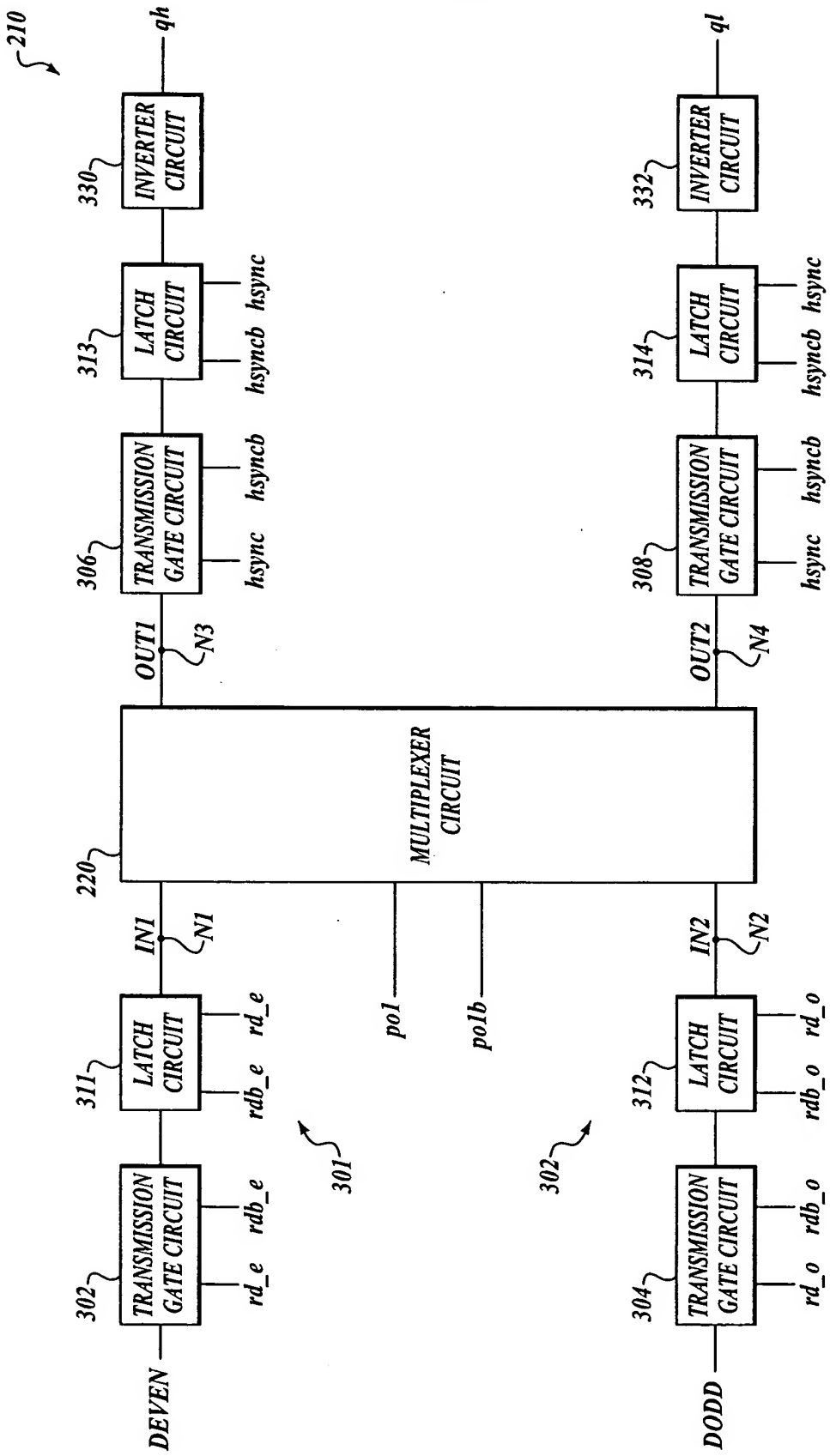

210
qh
330
INVERTER CIRCUIT
313
LATCH CIRCUIT
hsync
hsyncb
306
TRANSMISSION GATE CIRCUIT
OUT1
N3
220
MULTIPLEXER CIRCUIT
IN1
N1
311
LATCH CIRCUIT
rd_e
rdb_e
302
TRANSMISSION GATE CIRCUIT
DEVEN
301
po1
po1b
302
ql
332
INVERTER CIRCUIT
314
LATCH CIRCUIT
hsync
hsyncb
308
TRANSMISSION GATE CIRCUIT
OUT2
N4
IN2
N2
312
LATCH CIRCUIT
rd_o
rdb_o
304
TRANSMISSION GATE CIRCUIT
DODD

Fig. 3

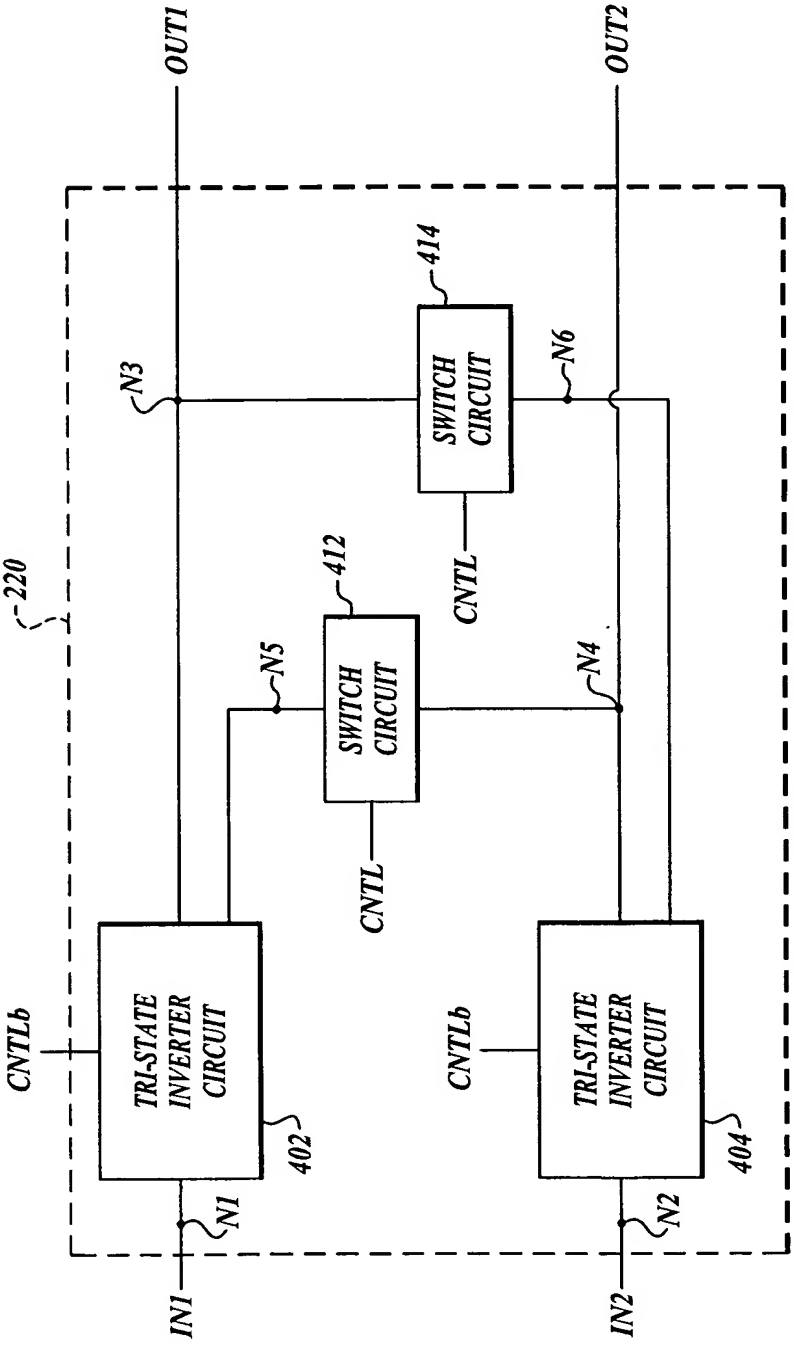

OUT1
OUT2
414
SWITCH CIRCUIT
N3
N6
220
412
CNTL
N5
SWITCH CIRCUIT
N4
CNTL
CNTLb
TRI-STATE INVERTER CIRCUIT
402
CNTLb
TRI-STATE INVERTER CIRCUIT
404
N1
N2
IN1
IN2

Fig. 4

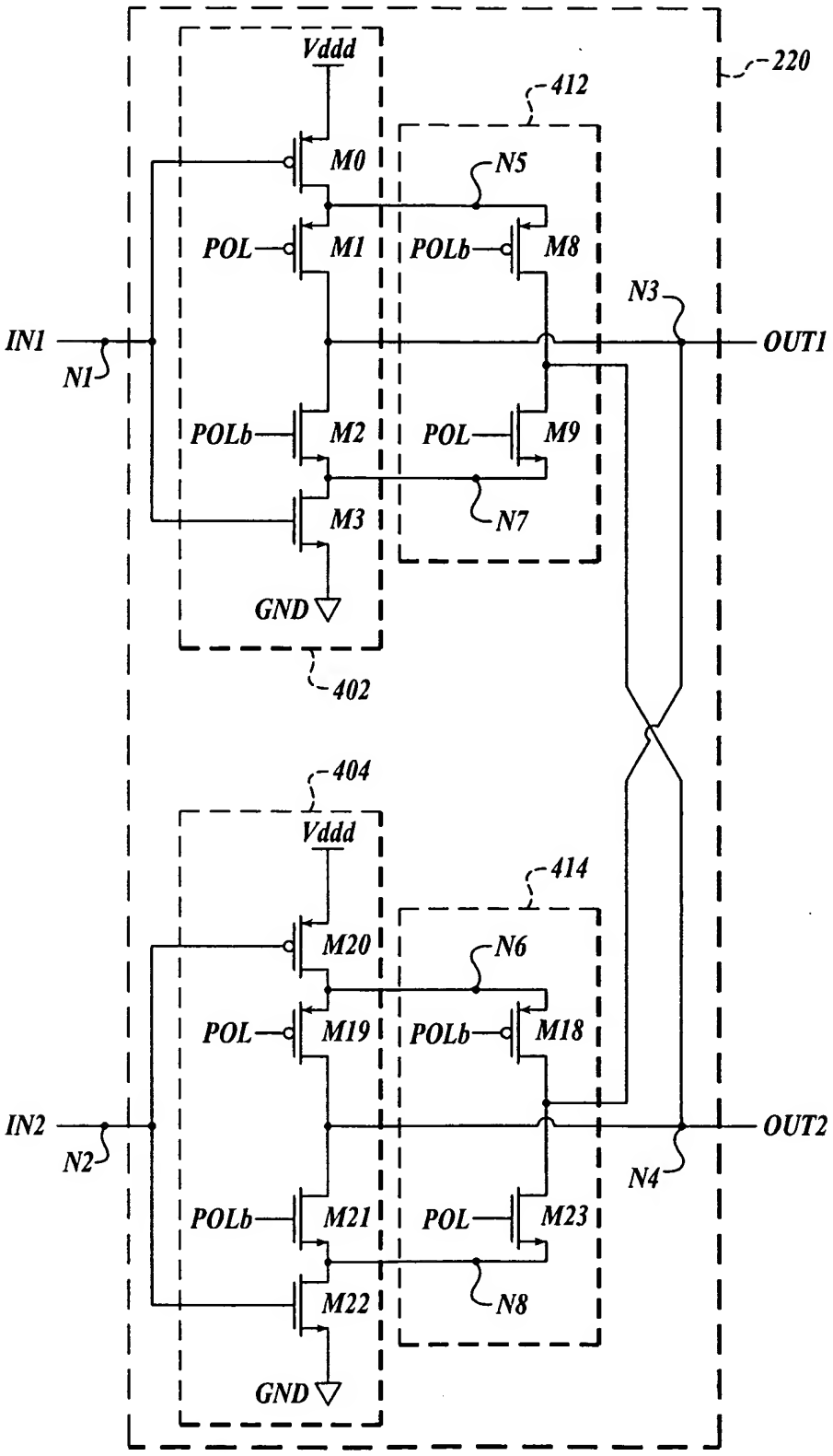

220
Vddd
412
M0
N5
POL
M1
POLb
M8
N3
IN1
N1
OUT1
POLb
M2
POL
M9
M3
N7
GND
402
404
Vddd
414
M20
N6
POL
M19
POLb
M18
IN2
N2
OUT2
N4
POLb
M21
POL
M23
M22
N8
GND

Fig. 5